REMARKS

The specification is amended to correct a minor typographical error.

Claim 1 is amended herein by adding the recitation that the same organometal compound is used throughout the formation of the vapor deposited film while feeding the gas of the organometal compound at a constant rate. Support is found, for example, in Applied Example 1 at pages 31-32. No new matter is presented.

Claims 1-14 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Suzuki et al (EP 0762151).

Applicants traverse the rejection.

According to the method of forming a chemical vapor deposited film of the present invention as described in the amended claim 1, the same organometal compound is used throughout the step of forming the plasma CVD film while feeding a gas of the organometal compound at a constant rate. In this state, the rate of feeding the oxidizing gas is varied in order to control the composition of the chemical vapor deposited film that is formed. This makes it possible to stably control the composition of the vapor deposited film, to constantly and stably vary the composition in the direction of thickness and, therefore, to form, on the substrate, a vapor deposited film without dispersion in the properties such as gas-barrier property, etc.

Further, the chemical vapor deposited film of the present invention described in claim 9 is formed by utilizing the above method, and has a gas-barrier layer region positioned on the side of the substrate and an outer surface protection layer region positioned on the surface of the gas-barrier layer region. Here, since the film is formed by plasma CVD while feeding the organometal compound gas at a constant rate at all times, the film composition continuously varies without any distinct interface between the gas-barrier layer region and the outer surface

protection layer region. Therefore, the problem of interlayer peeling does not occur and, hence, a stable gas-barrier property is obtained. Further, the outer surface protection layer region has a carbon concentration which is adjusted to be not lower than 15% on the basis of three elements of a metal element (M), oxygen (O) and carbon (C). Formation of the above carbon-rich (means alkyl-rich) outer surface protection layer region makes it possible to effectively prevent the film surface from adsorbing water and to effectively prevent water vapor from infiltrating through the film surface.

The Suzuki reference, on the other hand, discloses an optical article obtained by forming a vapor deposited film comprising a modified layer and a hard coat layer on the surface of a synthetic resin base member such as a plastic lens or the like. Suzuki further teaches forming the modified layer and the hard coat layer by plasma CVD, and effecting the plasma CVD by using an organometal compound gas and a oxidizing gas (oxygen) while varying the composition of gases.

However, the Suzuki reference does not at all disclose, teach or suggest using the same organometal compound throughout the step of plasma CVD while maintaining constant the rate of feeding the organometal compound. For example, in many of its Examples, the Suzuki reference attempts to vary the rate of feeding the organometal compound or to vary the composition of a mixed gas of a plurality of kinds of organometal compound gases. Therefore, though the composition of the vapor deposited film that is formed varies in the direction of thickness thereof, it is difficult to strictly control the change in the composition. Also, properties such as gas-barrier property and the like lose stability and tend to be dispersed. This problem of the prior art is described in the present specification, at page 3, lines 14-25. In fact, the Suzuki reference relates to an optical article which does not require a gas-barrier property and in which

the refractive index is simply varied in the direction of thickness thereof, but does not at all disclose, teach or suggest the gas-barrier property.

Accordingly, the method of forming the vapor deposited film comprising the modified layer and the hard coat layer disclosed in the Suzuki reference is clearly different from the method described in amended claim 1. Besides, it is quite clear that the Suzuki reference does not disclose, teach or imply stably obtaining the vapor deposited film without dispersion in the gas-barrier property by executing the plasma CVD without varying the rate of feeding the organometal compound gas, i.e., maintaining constant the rate of feeding the organometal compound gas. Specifically, Suzuki et al fails to disclose the limitation of present claim 1, which provides that the same organometal compound is used throughout the formation of the vapor deposited film while feeding the gas of the organometal compound at a constant rate. For at least this reason, claim 1 and claims 2-8 dependent thereon are not anticipated by Suzuki et al.

Further, unlike the present invention, the vapor deposited film disclosed in the Suzuki et al reference does not form a carbon-rich region (alkyl-rich region) in the surface, and therefore is quite different from the vapor deposited film of the present invention as recited in claim 9.

In the vapor deposited film of present claim 9, for example, the surface protection layer region positioned on the side of the outer surface is a carbon-rich region (alkyl-rich region) and functions to protect the vapor deposited film from water and to prevent adsorption of water or infiltration of water vapor. Owing to its carbon-rich region, further, the vapor deposited film of the present invention is rich in organic property and exhibits a high degree of flexibility. On the other hand, the vapor deposited film disclosed by Suzuki et al is formed on the surface of a base member such as a plastic lens. Therefore, a hard coat layer is formed on the surface of the vapor deposited film. Although the Suzuki et al reference is silent about the elemental composition of

the film, it is clear that the hard coat layer contains almost no carbon element. This is because if too much carbon is contained, the vapor deposited film would exhibit improved flexibility but decreased hardness losing its function as a hard coat layer and making it difficult to prevent the lens from being scratched.

It is, therefore, understood that the vapor deposited film of the Suzuki et al reference has surface properties differing from those of the vapor deposited film of the present invention (claim 9). For at least this reason, claim 9 and claims 10-14 dependent thereon are not anticipated by Suzuki.

Further, the vapor deposited film of the Suzuki et al reference is formed of many layers having different refractive indexes in which rays of light reflected by the interfaces of the layers must be cancelled by each other to prevent the occurrence of interference fringes. That is, distinct interferences are present among many layers. On the other hand, according to the present invention, the film is vapor-deposited under a condition where an organometal compound gas is being fed at a constant rate and has an elemental composition shown, for example, in Fig. 2. As will be understood from this figure, the elemental composition is continuously varies between the gas-barrier layer region and the surface protection layer region, and there is no distinct interface. It is therefore understood that the vapor deposited film of the Suzuki reference never assumes the structure of the present invention. This is because the structure of Fig. 2 cannot prevent the occurrence of interference fringes.

As described above, the vapor deposited film of the Suzuki et al reference is altogether different from the vapor deposited film of the present invention of claim 9. The Suzuki et al reference does not at all disclose, teach or suggest the elemental composition of the vapor deposited film (particularly, setting the carbon concentration to be not smaller than 15 elemental

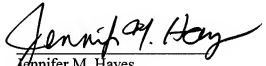
%). The Suzuki et al reference also fails to teach suppressing the adsorption of water or suppressing the infiltration of water vapor by forming a carbon-rich region. For these additional reasons, the present invention is not anticipated, nor rendered obvious by Suzuki.

Accordingly, Applicants respectfully request withdrawal of the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Jennifer M. Hayes
Registration No. 40,641

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860
WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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